

ABSTRACT

A method of forming a MIM capacitor, and the resultant MIM capacitor, comprising the following steps. A structure having a metal structure formed thereover is provided. A dielectric layer is formed over the metal structure and a top layer is formed over the dielectric layer. A capacitance trench is formed through the top layer and into the dielectric layer. Respective bottom electrodes are formed over the opposing side walls of the capacitance trench. A capacitance dielectric layer is formed over: the respective bottom electrodes; the bottom of the capacitance trench; and the remaining top layer. Respective opposing initial via openings are formed adjacent the capacitance trench. Respective trench openings are formed above, continuous and contiguous with the lower portions of the respective opposing initial via openings and exposing portions of the underlying metal structure to form respective opposing dual damascene openings. Planarized metal portions are formed within: the dual damascene openings; and the capacitance trench to form a top electrode.